ED 379 277 SP 035 810

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TITLE The Role of Content Knowledge in Instructional

Supervision.

PUB DATE Feb 95

NOTE 18p.; Research report presented at the Annual Meeting

of the Association or Teacher Educators (75th,

Detroit, MI, February 19-22, 1995).

PUB TYPE Speeches/Conference Papers (150) -- Reports -

Research/Technical (143) -- Tests/Evaluation

Instruments (160)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Beginning Teachers; Elementary Secondary Education;

> Higher Education; Interviews; *Knowledge Level; *Supervisor Qualifications; *Supervisory Methods; Surveys; *Teacher Attitudes; Teacher Education; Teacher Effectiveness: Teacher Evaluation: *Teacher

Supervision; Teaching Experience

IDENTIFIERS *Pedagogical Content Knowledge

ABSTRACT

This study investigated inservice teachers' perceptions of the importance for instructional supervisors to possess content knowledge in the content areas that they supervise. Questionnaires were completed by 120 teachers from two elementary, one middle, and one high school, and follow-up interviews were conducted with 20 respondents. Teachers strongly supported the premise that supervisors should be content specialists in the content areas they observe. Out of six supervisory services, teachers ranked feedback about the effectiveness of instruction in relation to content as the most important service. Teachers felt that supervisors with content knowledge gave improved help and feedback, knew what instructional strategies to suggest based on content, gave fairer evaluations of a teacher's classroom performance, had up-to-date knowledge of trends and issues in the content area, and elicited greater respect from teachers, and supported the best interest of the content area when programmatic changes are made and funds are allocated. Teachers' perceptions changed according to the instructional supervision method used (nominal, prescriptive, or reflective). Multi-subject certificated teachers had a higher percentage of agreement with supervisors' need for content knowledge than did single-subject certificated teachers. Experienced teachers desired instructional supervisors' content knowledge more than novice teachers. Implications for teacher education and supervisory practice are outlined. The supervision questionnaire and an interview protocol are appended. (Contains 19 references.) (JDD)



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THE ROLE OF CONTENT KNOWLEDGE IN INSTRUCTIONAL SUPERVISION

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Research Report presented at the 1995 Annual Meeting of the Association of Teacher Educators Detroit, Michigan February, 1995

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The Role of Content Knowledge in Instructional Supervision

The field of instructional supervision is in the process of transition from a classroom observation emphasis on generic teaching behaviors and pedagogy to the interaction of content and instruction (Glickman, 1992). Until recently, teacher behaviors and skills recommended in teaching effectiveness research have been the primary focus of the supervisory process (Darling-Hammond & Sclan, 1992, Nolan, 1988). According to Darling-Hammond and Sclan (1992), the results of teaching effectiveness research far too often have been directly translated into items on rating scales. Instructional supervisors often use the rating scales simply to record the absence or presence of skills such as the use of wait-time, use of positive feedback, use of higher-level questions, and student time-on-task (Rosenshine & Stevens, 1986).

Currently, the results of educational research emphasize that both the substantive and syntactic organization of content and students' misconceptions about content drive teachers' selection of instructional strategies (Carpenter, Fennema, Peterson, Chiang, and Loef, 1989; Grossman, 1989; Rovegno, 1992; Smith & Neale, 1989). The influences of content on instruction are classified as pedagogical content knowledge, a separate category of the knowledge base of teaching (Shulman, 1986, 1987). Referred to as the amalgam of content and pedagogy (Shulman, 1987), pedagogical content knowledge enables teachers to present content in a manner in which students can understand and relate.

To provide the most comprehensive feedback, supervisors need to be aware of the impact of content on instructional decision making. As Nolan (1988) states, the content knowledge of the supervisor plays a role in determining his/her perceptions of lesson quality and the issues that are discussed during the supervisory process. Clearly, the focus of the observation and conference of a lesson could differ depending upon whether a generalist supervisor who is well-prepared in generic teaching strategies or a content specialist supervisor who has a depth of perception in that subject observes the lesson.

Summary of the Problem

The heightened interest in the role of content knowledge and of the process of teaching so that students can understand that content (pedagogical content knowledge) has prompted



scholars in the field of supervision to call for research investigating how content knowledge relates to the supervisory process (Alfonso & Firth, 1990; Glickman, 1992; Nolan, 1988; Oliva, 1993). In 1988, Nolan stated that inquiry in this area was almost non-existent. Therefore, the purpose of this research was to contribute to a better understanding of the role of content knowledge in instructional supervision. More specifically, this study investigated inservice teachers' perceptions of the importance for instructional supervisors to possess content knowledge in the content areas that they supervise. The results of this study provide baseline information that school administrators and teachers can consult when collaboratively planning improvements for present supervisory services.

Research Questions

- 1. How do teachers characterize the importance of instructional supervisors' content knowledge of the subject areas they supervise?
- 2. Do teachers' perceptions of the importance of instructional supervisors' content knowledge vary according to instructional supervision method (e.g., nominal, prescriptive, or reflective)?
- 3. Do teachers with multi-subject certification (e.g. early childhood, elementary, special education) have different perceptions of the importance of instructional supervisors' content knowledge than teachers with single-subject certification (e.g., secondary, K-12 content area)?
- 4. Do novice teachers' perceptions of the importance of instructional supervisors' content knowledge differ from experienced teachers' perceptions?

Setting and Methodology

Teachers in a rural Maryland school district were selected to participate in the study. These teachers taught a wide variety of subject areas at two elementary schools, one middle school, and one high school. The district implemented instructional supervision in the following manner:

Both generalist and content-specialist central office supervisors and principals observed teachers for evaluative purposes at least twice a year. A standardized classroom observation form based on effective teaching practices was used to record teachers' strengths and needs for improvement.

Data collection instruments for this naturalistic study consisted of a questionnaire and interview protocol, both developed and validated by the researcher (Appendices A and B). Demographic and attitudinal items in both open and closed formats were included on the



questionnaire. The questions on the interview protocol were precisely worded; however, the researcher felt free to probe when answers warranted exploring a subject in greater depth.

Between December 1992 and February 1993, 203 inservice teachers were presented with the questionnaire. Of the total surveyed, 120 teachers returned completed questionnaires. Twenty teachers were selected from the questionnaire respondents for a follow-up interview. The criterion for selection was response to a questionnaire item that requested teachers to indicate on a Likert-type scale the degree to which they thought it essential for instructional supervisors to have content knowledge of the subject areas that they observe (question 16, Appendix A). Eight teachers who either disagreed with the statement or were undecided about the statement and eight teachers who agreed with the statement were chosen to interview. Four additional teachers were selected on the basis of detailed answers they provided on open-ended questionnaire items. Roughly equal numbers of novice, experienced, single-subject certificated, multi-subject certificated, elementary, middle, and high school teachers were represented in the interview sample.

Within the naturalistic research design of this study, both qualitative and quantitative methods of inquiry were employed. The quantitative data yielded by the closed-format items on the questionnaire were displayed in tables as frequency counts, percentages, and/or mean scores. Relationships between variables (experienced/novice, single-subject certification/multiple subject certification, style of supervision) were represented by cross tabulation. Data generated from responses to the open-format questionnaire items and the interview protocol were analyzed by constant comparison and triangulated to yield emergent categories related to the research questions.

Synopsis of the Findings

Research question I: How do teachers characterize the importance of instructional supervisors' content knowledge of the subject areas they supervise?

Teachers in the respondent sample strongly supported the premise that supervisors should be content specialists in the content areas they observe. Eighty-seven percent of the sample either "strongly agreed" or "agreed" with a Likert-type questionnaire item containing a sentence stating that it was essential for supervisors to have content knowledge of the subject areas they observe (Table 1). Furthermore, out of a field of six supervisory services (question 15,



Appendix A), teachers ranked feedback about the effectiveness of instruction in relation to content as the most important service (Table 2).

Table 1

ASSESSMENT OF THE NEED FOR SUPERVISORS

TO HAVE CONTENT KNOWLEDGE BY RESPONDENT SAMPLE

Assessment	n	%	
Strongly Agree	67	56	
Agree	37	31	
Undecided	8	7	
Disagree	5	4	
Strongly Disagree	2	2	
No Response	1	1	
Totals	120	*101	

^{*} Column does not add to 100% because of rounding.

Table 2

RANK ORDER OF SUPERVISORY SERVICES BY RESPONDENT SAMPLE

Service	Mean	Rank Order
Content Issues	4.8	1
Classroom Management	4.0	2
Questioning Strategies	3.9	3
Workshop Information	3.7	4
Special Needs Students	3.0	5
Time-On-Task	2.8	6



Categories of reasons why teachers desired supervision from content specialists emerged from 139 responses to open-format questionnaire items and interview protocol questions. These categories are listed below in order of frequency of responses. Teachers stated that supervisors with content knowledge: (a) give improved help and feedback (57), (b) know what instructional strategies to suggest based on the content that is taught (29), (c) give fairer evaluations of a teachers' classroom performance (17), (d) have up-to-date knowledge of trends and issues in the content area (16), (e) elicit greater respect from teachers (9), (f) support the best interests of the content area when programmatic changes are made and funds are allocated (5), and (g) miscellaneous comments (6).

Teachers who did not think it was essential for supervisors to have content knowledge were also asked to describe the reasons that supported their claim that a generalist could supervise effectively. The following categories emerged from analysis of a total of 35 responses and are listed in order from most to least mentioned: (a) Generic teaching skills apply to all content areas (18), (b) the supervisor should consult the teacher about the subject of the lesson and why particular strategies are chosen (4), (c) evaluation forms are generic (2), (d) novice teachers especially need generic assistance to perfect basic teaching skills (2), and (e) miscellaneous comments (9).

Research question II: Do teachers' perceptions of the importance of instructional supervisors' content knowledge vary according to instructional supervision method (nominal, prescriptive or reflective)?

Teachers' responses to interview protocol questions indicate that their perceptions of the necessity for instructional supervisor content knowledge do change according to the type of supervision practiced by the instructional supervisor. Goldsberry's (1988) conceptualizations of nominal, prescriptive and reflective supervision were the methods of supervision used for discussion in this study. The majority of teachers stated that instructional supervisor content knowledge was needed for prescriptive and reflective supervision, but not for nominal supervision. The rationales for teacher responses follow.

Nominal supervision. Teachers maintained that because of the minimal number of observations characteristic of nominal supervision, generic strategies were all that could be



discerned by the supervisor. Therefore, content knowledge was not necessary for the instructional supervisor.

<u>Prescriptive supervision</u>. Teachers stated that content knowledge was necessary for the supervisor using prescriptive techniques. Content knowledge would help make the supervisor's suggestions more realistic and credible; therefore, teachers would find the prescriptions less offensive than those received from a generalist.

Reflective supervision. Reflective supervision was the preferred method of supervision endorsed by teachers. Nine of the twenty teachers who were interviewed mentioned that supervisors with content knowledge would be able to utilize the reflective process more effectively. Because teachers' questions and problems would be specific to their content area, they stated that the supervisor would need content knowledge in order to provide effective help and feedback. Five teachers, on the other hand, felt that supervisors' content knowledge was not necessary for reflective supervision because they could brief their supervisors in advance about the lessons' topic and strategies employed to teach that topic. Because teacher and supervisor collaborated as peers with the mutual aim of improving instruction, the different strengths of teacher and supervisor could be utilized as an asset rather than a liability.

Research question III: Do teachers with multi-subject certification (e.g., early childhood, elementary, special education) have different perceptions of the importance of instructional supervisors' content knowledge than teachers with single-subject certification (e.g., secondary, K-12 content area)?

Both single-subject and multi-subject certificated teachers indicated that instructional supervisors should have content knowledge of the subject areas that they observe. Although both groups supported this premise, further examination of the data revealed differences in perception between the two groups.

When asked to indicate level of agreement with a sentence stating that it was essential for instructional supervisors to have content knowledge (question 16, Appendix A), multi-subject certificated teachers had a higher percentage of agreement than single-subject certificated teachers. The multi-subject teachers in early childhood and special education had 100% agreement with the sentence, followed closely by elementary teachers with 91% agreement.



Single-subject teachers' percentages of agreement were 81% for secondary teachers and 80% for K-12 content area teachers.

Research results indicate that elementary education majors tend to choose teaching primarily because of a love of children and secondary education majors because of a love of their content area (Killian & McIntyre, 1984; Werner, 1993). Logic suggests that because of their love of content area, single-subject certificated teachers would prefer supervision from a content specialist more than multi-subject certificated teachers. For this reason, the researcher considered the multi-subject teachers' higher level of agreement to be an unexpected finding. Examination of the qualitative data revealed a possible reason for the discrepancy. Twenty-four multi-subject teachers who supported supervision from content specialists stated that their supervisors should have knowledge of child development so they could offer suggestions for improvement that were realistic and geared to the proper level of difficulty for young children. Teachers stated this opinion very strongly. A sample quote follows:

I have found it very frustrating to have supervisors who lack training and experience in early childhood education. They require inappropriate curriculum, unrealistic goals, and false results.

Some teachers who had previously strongly agreed that their supervisors should have content knowledge felt so strongly about supervisor knowledge of developmental appropriateness that they insisted that they would choose an elementary generalist supervisor over a content specialist who had no experience in the elementary grades. These teachers may have included child development knowledge as part of their definition of content knowledge, hence the high degree of agreement among multi-subject teachers that instructional supervisors should have knowledge of the content areas they observe.

Research question IV: Do novice teachers' perceptions of the importance of instructional supervisors' content knowledge differ from experienced teachers' perceptions?

The data suggested that the experienced teachers desired instructional supervisors' content kt.owledge more than novice teachers. A high percentage of both novice and experienced teachers marked "agree" or "strongly agree" on the questionnaire item containing a sentence stating that it was essential for instructional supervisors to have content knowledge of the subject areas that they observe (question 16, Appendix A). The experienced teachers' percentage of agreement (88%), however, was higher than the novices' percentage (79%). In



addition, although both groups of teachers ranked supervisor feedback about content-related issues first out of a field of six supervisory services (question 15, Appendix A), experienced teachers' mean score (5.0 out of a possible total of 6.0) was higher than novice teachers' mean score (4.7). Novice teachers ranked supervisor feedback about classroom management a close second (4.6). The experienced teachers' second choice, supervisor feedback about questioning strategies, ranked a distant second (4.0).

These findings support the results of recent studies (Feiman-Nemser & Parker, 1990; Grossman & Richert, 1988) that contend that novice teachers are not only concerned about survival in the classroom (Fuller & Bown, 1975), but also about how to teach their particular subject matter. The result that novices were almost equally concerned with classroom management is substantiated by Veenman's (1984) identification of classroom management as a primary concern of novice teachers.

Implications for Teacher Education and Supervisory Practice

The results of this study support the following implications for teacher education and supervisory practice in schools:

Teacher Education

Although this study was conducted using practicing teachers as participants, an implication for teacher education can be inferred. Since, according to this study, novice teachers desire feedback about their teaching of content, provision for feedback of this type also could be informative in student teaching. The student teacher has the advantage of receiving feedback from a cooperating teacher who acts as both a generalist and a content specialist, and a college supervisor who, in most cases, is a generalist. However, additional consideration might be given to the provision of additional supervision from college instructors of methods classes in specific content areas.

Supervisory Practice

1. Provisions should be made in school districts for supervision by content specialists at all school levels. In addition, content specialists, particularly those who supervise at the elementary level, should have previous experience teaching at the certification level that they supervise.



- 2. Supervisors should use the reflective method of supervision, particularly when working with teachers who have taught their subject area(s) for several years.
- 3. Generalist supervision, which is most beneficial for novice teachers, should be provided by principals and/or generalist supervisors who use reflective supervision.
- 4. The ideal supervisor would possess content knowledge as well as a thorough understanding of both effective teaching research and supervision techniques.

Admittedly, the provision of a content specialist supervisor for each subject area poses problems for small school districts with limited financial resources. One possible solution for this problem is to house content specialists for the direct supervision of classroom teachers in intermediate units that operate as cooperative educational agencies for several school districts. As a result, small school districts would share in the costs of hiring content specialists to supervise specific subject areas. School principals could function as generalist supervisors. If privatization of public education becomes prevalent, it is also conceivable that the services of content specialists could be contracted from private agencies.



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Appendix A

SUPERVISION QUESTIONNAIRE

1.	Gender:
	Female
	Male
2.	Age:
	20 - 24
	25 or older
3.	How many years of teaching experience do you have?
4.	What is the certification on your teaching certificate?
	Early Childhood
	Elementary
	Specialty area (if applicable)
	Secondary
	Content area
	Special education
	Exceptionality
	K-12
	Content area
	Other (Please specify)
5.	Highest level of education:
	Bachelor's degree
	Bachelor's plus
	Master's degree
	Master's plus
	Ph.D. or Ed.D.
6.	What grade level(s) do you currently teach?
7.	What other grade level(s) have you previously taught?
8.	What content area(s) do you currently teach?



9.	What other content area(s) have you previously taught?
10.	Please list the professional organizations to which you belong.
11.	Please list the professional journals to which you subscribe or regularly read.
12.	Who is responsible for your instructional supervision? Check all that apply.
	Principal Instructional supervisor (Central Office personnel with official supervisor title)
13.	Do persons involved with your instructional supervision have BOTH subject matter expertise and knowledge of how to teach the content that he or she observes?
	Principal: Yes No Instructional supervisor: Yes No
	For questions 14 - 18, please consider instructional supervisors only.
14	How often does your supervisor talk to you about subject matter after an observation of your instruction? Always Often Sometimes Never
15	The following item contains services that may be provided by an instructional supervisor. Please rank these services according to how important they are to your professional growth, with "1" being the most important and "6" being the least.
	Provides information about workshops and conventions in your content area(s)
	Provides feedback about classroom management issues
	Assists in identifying individual students with special instructional needs
	Provides feedback about students' time-on-task
	Provides feedback about the effectiveness of instruction in relation to content issue
	Provides feedback about questioning strategies



16. Please read the following statement. Next, circle the answer that most accurately represents the degree to which you agree with the statement.

It is essential that instructional supervisors have subject matter expertise and knowledge of how to teach the subject matter in the content areas that they observe.

CIRCLE ONE:

SD	D	U	Α	SA
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

- 17. Please list and describe reasons why you do or do not consider it essential for instructional supervisors to have subject matter expertise and knowledge of how to teach the subject matter in the content areas that they observe. Use the back, if necessary.
- 18. What type of instructional supervision do you receive? Check the category that best applies to your current supervisory experiences.

Nominal supervision: Your supervisor observes you once or twice
year to comply with legal requirements for evaluation. After your
observation, you read and sign a checklist or other evaluation
form that is subsequently placed in your permanent record file.

Prescriptive supervision: After your supervisor observes your instruction, she or he offers feedback geared toward improvement of your teaching skill. You read and sign and evaluation form that is subsequently placed in your permanent record file.

Reflective supervision: Your supervisor considers your input regarding the teaching episode she or he has just observed. Together, you examine data and other documentation that your supervisor collects during the observation in order to discover patterns that may help to clarify instructional problems and their solutions.

- 19. If you have taught for two or more years, have your supervision needs changed? Please explain why and how your needs have changed, if applicable. Use the back, if necessary.
- 20. Please include any additional comments that you think are relevant to the role of subject matter expertise and knowledge of how to teach subject matter on the part of your instructional supervisor(s). Use the back, if necessary.



Appendix B

Interview Protocol

Opening statement: Scholars have recently begun to investigate whether instructional supervisors need to have content knowledge in order to make informed judgments about the quality of teachers' instruction. Because you are directly involved in the supervisory process, your opinion regarding this matter is greatly desired. Your responses to the following questions will be reported in this study, but your identity will remain confidential. Your participation is voluntary.

- 1. Approximately how many times per year are you observed by your instructional supervisor(s)?
- 2. Please describe the process by which you are supervised.
- 3. How important do you think it is that your instructional supervisor(s) has (have) subject matter expertise in your content areas? Please describe why.
- 4. I will read three supervisory scenarios which are typed on the card that you are holding. Please tell me how important you think it is in each—scenario that the instructional supervisor has knowledge of content and how to teach that content so that students understand.
 - a. <u>Nominal supervision</u>: Your supervisor or principal observes you once every year for the purposes of evaluation. Your supervisor fills out a standard evaluation form while she or he observes you teach. After the observation, your supervisor meets with you, debriefs the comments on the evaluation form, and requests your signature on the form. The form is placed in your permanent record file.
 - b. <u>Prescriptive supervision</u>: Your supervisor observes you several times a year. She or he meets with you after each observation, tells you what area(s) of your teaching need(s) to be improved, and prescribes ways in which you can implement the improvements.
 - c. Reflective supervision: In this scenario, you and your instructional supervisor work as a collaborative team. The two of you meet before the observation. During that time, you brief your supervisor about the lesson you will teach. Perhaps you suggest areas of teaching which your supervisor should focus upon. During your lesson, your supervisor writes down data that is pertinent to the areas you wish to investigate. Often the data is in the form of verbatim comments or questions during the instruction. After the lesson, you both review the data for patterns that reveal problem areas. Together, you and your supervisor brainstorm for solutions to problems and set goals for improvement.



- 5. What knowledge or skills should your instructional supervisor possess in order to maximize your professional growth?
- 6. Please describe how teachers can develop expertise in content areas and instructional improvement without the input of instructional supervisors.
- 7. Please describe your conception of the ideal supervisory process.
- 8. On the questionnaire, you were asked to describe how your supervisory needs have changed as you have gained experience in the classroom. Would you please elaborate on your answer now?
- 9. Please add any additional comments you have about the role of content knowledge in the supervisory process.

